

**REMARKS**

This is a response to the Office Action mailed on 20 January 2006. Claims 1, 7 - 9 and 18 were rejected. Claims 1 and 18 have been amended. Claims 1, 7 - 9 and 18 remain for consideration

Applicants note that all prior rejections, including the rejection under 35 U.S.C. § 112, 2<sup>nd</sup> ¶, have been overcome.

**Claim rejections - 35 U.S.C. § 102**

Examiner has now rejected claims 1 and 18 as allegedly anticipated by U.S. Pat. No. 3,936,009 to Highberg. In light of the preceding clarifying claim amendments and following remarks, Applicants respectfully traverse the rejection.

Highberg shows an apparatus for surfacing, which uses a series of grinding wheels 21 having diamonds mounted on what are shown as generally planar surfaces. Highberg discloses that the invention is useful for surfacing glass, stone, and ceramics (col. 1, lines 21 - 29) but does not mention metals. In addition, the wheels 21 in Highberg (FIGS. 2 and 3) are intended and designed to polish objects defined by large, planar surfaces, e.g., sheets of glass. Moreover, Highberg does not teach, suggest or provide any motivation that a polished products is going to be subsequently coated.

In contrast, the present invention as defined in the claims is directed to a process for preparing a non-planar, metal substrate to receive a ceramic coating, including removing material from a surface of the metal substrate at a progressively decreasing rate. Inasmuch as Highberg neither relates to preparing non-planar substrates, e.g., gas turbine engine parts, to receive coatings such as ceramic coatings, nor teaches or suggests removing material from metal substrates, Applicants respectfully submit that Highberg does not anticipate the present invention, and that the rejection be withdrawn.

Claim rejections - 35 U.S.C. § 103

Examiner rejected claims 1, 7 - 9 and 18 as allegedly unpatentable over Liebke (discussed in the Examiner's previous action and in Applicants' response to that Action) and Highberg.

As discussed in Applicants' previous response, Liebke shows a method of removing excess overlay coating from *within cooling holes* of aluminide coated gas turbine engine components. While Liebke does relate to the removal of material using abrasive means (an abrasive-containing slurry), it does not discuss any particular rate at which the material is removed, let alone altering the rate at which material is removed. More specifically, Liebke does not disclose or suggest the removal of material from a substrate "at a progressively decreasing rate" as set forth in independent claim 1 of the present application. The patent referenced in those portions (US Pat No. 5,125,191) likewise does not appear to teach or suggest changing the rate at which material is removed from a surface of a substrate. Applicants therefore respectfully submit that the rejection be withdrawn.

The proposed combination of Highberg and Liebke is inappropriate. Highberg and Liebke do not disclose related technology.

As noted above, on one hand, Highberg uses rotating wheels to remove material from a flat surface, e.g., glass, stone or ceramic. Highberg makes no mention subsequently coating the surface of the glass, ceramic or stone.

On the other hand, Liebke removes material from *within* cooling holes of metal gas turbine parts by passing an abrasive slurry through the holes. As will be noted, the cooling holes are not planar surfaces, they extend in three dimensions Liebke teaches away from – or at least is silent – as to removing material from other than the cooling holes. Absent significant additional structure, the Liebke method is incapable of removing material from the surface of the parts, as Highberg is designed to do. Inasmuch as there is no teaching, suggestion or motivation to make the proposed combination, the proposed combination is inappropriate and the rejection should be withdrawn.

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For at least the foregoing reasons, Applicants submit that currently amended independent claim 1 and its respective dependent claims are allowable over the prior art of record. The remaining claims - claims - depend upon and further define the invention set forth in independent claim 1, and are further submitted to be patentable in view of the additional limitations set forth therein.

To the extent that claim 1 is allowable and is a generic claim, Applicants also respectfully submit that the non-elected species corresponding to claims 2 - 6, 10 - 12 and 19 are also allowable.

Applicants believe that no fees are due in connection with the filing of this response. Please charge our Deposit Account No. 21-0279 for any such fee.

The Examiner is invited to contact the undersigned if there are any questions.

Respectfully submitted,

  
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